

# Work Order ID 78576

**\*78576\***

Page 1

January-11-12 12:42:12 PM

Item ID: D412-664-203

Accept

**\*N900040100\***

Setup Start **\*NS1\***

Revision ID:

Stop **\*NS2\***

Item Name: Crosstube Aft

Start Date: 11/01/2012 Start Qty: 1.00 **\*1\***

Cust Item ID:

Required Date: 31/01/2012 Req'd Qty: 1.00 **\*1\***

Customer:

Reference:

Approvals: Process Plan: MLJ Date: 12/01/11 Tooling: \_\_\_\_\_ Date: \_\_\_\_\_

Run Start **\*NR1\***

QC: \_\_\_\_\_ Date: \_\_\_\_\_ SPC (Y/N): \_\_\_\_\_ Date: \_\_\_\_\_

Stop **\*NR2\***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
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Draw Nbr	Revision Nbr
D412-664-243	E/DEO

100  
**\*100\***  
DC  
Document Control

0.00  
DOCUMENT CONTROL  
Memo  
Photocopy bluefile and create labels as per PPP-D412-664-203 CHG 008

12-02-22 (1)  
MLJ 12-2-22

110  
**\*110\***  
Packaging  
Packaging

0.00  
Packaging  
Memo

MO

12/2/14

120  
**\*120\***  
CNC Bend 2  
CNC Alpha 160 Bender

0.00  
BENDING MACHINE - CROSSTUBES  
Memo  
Bend tube as per Dwg D412-664-243 using CNC bender program 412-aft and Folio FT010

JW  
AK

12-2-13

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries

# Work Order ID 78576

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Reference:

Approvals: Process Plan: \_\_\_\_\_ Date: \_\_\_\_\_ Tooling: \_\_\_\_\_ Date: \_\_\_\_\_

Run Start **\*NR1\***

QC: \_\_\_\_\_ Date: \_\_\_\_\_ SPC (Y/N): \_\_\_\_\_ Date: \_\_\_\_\_

Stop **\*NR2\***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
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130 QC15- Crosstube Dimensional Check 0.00

**\*130\***

QC

Memo

0.00

Quality Control

140

0.00

**\*140\***

Crosstubes

Crosstubes

Memo

0.00

1-Drill pilot holes in tube as per Dwg D412-664-243 using drill Jig DT8550 & DT8551 and drill table DT8577 using #9 holes as per QSI 10 to install towers.

2-Ream hole to finish size in tube as per Dwg D412-664-243 using drill Jig DT8550 & DT8551. Check dimensions between holes, both sides on both cuffs, to ensure alignment with saddle holes.

3-SCRIBE PART # & BATCH #

4-Deburr & Inspect for surface damage. Repair damage within limits as per Dwg D412-664-243

12-2-14

12-02-14

9mm

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

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Reference:

Approvals: Process Plan: \_\_\_\_\_ Date: \_\_\_\_\_ Tooling: \_\_\_\_\_ Date: \_\_\_\_\_

Run Start **\*NR1\***

QC: \_\_\_\_\_ Date: \_\_\_\_\_ SPC (Y/N): \_\_\_\_\_ Date: \_\_\_\_\_

Stop **\*NR2\***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
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150 Crosstubes Chemical Conversion 0.00

**\*150\***

HandFXtube

Memo

0.00

Hand Finishing Crosstubes

*MO / RM*

*12/2/15*

160 QC3- Inspect Part Finish 0.00

**\*160\***

QC

Memo

0.00

Quality Control

*8/26/16*

170 QC5- Inspect part completeness to step on W/O 0.00

**\*170\***

QC

Memo

0.00

Quality Control

*8/26/16*

# Dart Aerospace Ltd

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

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**Work Order ID 78576****\*78576\***

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Item Name: Crosstube Aft

Start Date: 11/01/2012 Start Qty: 1.00

**\*1\***

Cust Item ID:

Required Date: 31/01/2012 Req'd Qty: 1.00

**\*1\***

Customer:

Reference:

Approvals:

Process Plan:

Date:

Tooling:

Date:

Run Start **\*NR1\***

QC:

Date:

SPC (Y/N):

Date:

Stop **\*NR2\***Sequence ID/  
Work Center IDOperation  
DescriptionSet Up/  
Run Hours

Tool ID

Tool #

Plan  
CodeAccept  
QtyReject  
QtyReject  
NumberInsp.  
Stamp

180

Outsource process - NDT per QSI038 4.1

0.00

**\*180\***

Outsource2

Memo

0.00

Outsource process - NDT

Liquid Penetrant Inspection as per QSI 038Or  
Issue P/O: 16223 LPI as per ASTM 1417  
Level 2 Attach copy of NDT results to work orderCL 12/02/17

190

Packaging

0.00

**\*190\***

Packaging

Memo

0.00

Packaging

Inspect for transit damage  
Ensure copy of NDT results attached to work order.CL 12/1/17

200

QC5- Inspect part completeness to step on W/O

0.00

**\*200\***

QC

Memo

0.00

Quality Control

Inspect for damage &amp; ensure results are as per Dwg D412-664-203

Srlobia

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

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Customer:

Reference:

Approvals: Process Plan: \_\_\_\_\_ Date: \_\_\_\_\_ Tooling: \_\_\_\_\_ Date: \_\_\_\_\_

Run Start **\*NR1\***

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Stop **\*NR2\***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
--------------------------------	--------------------------	----------------------	---------	--------	--------------	---------------	---------------	------------------	----------------

210

0.00

**\*210\***

SprayPaint

SprayPaint

Memo

0.00

Spray Painting

\*\*\*Mask underside of crosstube as shown\*\*\*

1-Prime inside and outside crosstube as per QSI 005 4.2

2-Paint outside crosstube with White Imron as per DEO D412-664-243 and QSI 005 4.2

PRIME:

Start Time: 11:30

Finish Time: 2:45

PAINT:

Start Time: 10:15

Finish Time: 11:20

AP 12-2-17

AP 12-2-19

220

QC14- Inspect Spray Paint

0.00

**\*220\***

QC

Memo

0.00

Quality Control

Then, Wrap in plastic bag to protect from scratches

*MA 12.02.20 (1)*

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

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Cust Item ID:

Required Date: 31/01/2012 Req'd Qty: 1.00 **\*1\***

Customer:

Reference:

Approvals: Process Plan: \_\_\_\_\_ Date: \_\_\_\_\_ Tooling: \_\_\_\_\_ Date: \_\_\_\_\_

Run Start **\*NR1\***

QC: \_\_\_\_\_ Date: \_\_\_\_\_ SPC (Y/N): \_\_\_\_\_ Date: \_\_\_\_\_

Stop **\*NR2\***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
--------------------------------	--------------------------	----------------------	---------	--------	--------------	---------------	---------------	------------------	----------------

230

0.00

**\*230\***

Crosstubes

Crosstubes

Memo

0.00

Assemble as per Dwg D412-664-203

1- Install chafing shield as per DEO D412-664-243. Top holes should be facing up.

A/R Proseal 890 Batch: 120072  
EXP: 09/12

2- Lightly scuff the bonded area using a 320 grit sand paper and clean the area with 41058 wash 'n' wipe

3- Install support with Scotch-Weld DP460 and install clamps as per DEO Dwg D12-664-243 using installation jig DT9024. Torque clamps as per dwg

A/R Scotch-Weld DP460 Batch: 119341  
EXP: 21 Oct 2012

12 - 2 - 21

240

QC5- Inspect part completeness to step on W/O

0.00

**\*240\***

QC

Memo

0.00

Quality Control

12 - 12 - 22 (1)

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

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**NOTE:** Date & initial all entries

**Work Order ID 78576****\*78576\***

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January-11-12 12:42:12 PM

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**\*N900040100\***Setup Start **\*NS1\***

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Customer:

Reference:

Approvals: Process Plan: \_\_\_\_\_ Date: \_\_\_\_\_ Tooling: \_\_\_\_\_ Date: \_\_\_\_\_

Run Start **\*NR1\***

QC: \_\_\_\_\_ Date: \_\_\_\_\_ SPC (Y/N): \_\_\_\_\_ Date: \_\_\_\_\_

Stop **\*NR2\***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
--------------------------------	--------------------------	----------------------	---------	--------	--------------	---------------	---------------	------------------	----------------

250

Pick Kit

0.00

**\*250\***

Packaging

Memo

0.00

Packaging

80 12-02-22

260

QC4- 100% Inspect kits for completeness

0.00

**\*260\***

QC

Memo

0.00

Quality Control

W 12 02 22 (1)

270

Packaging

0.00

**\*270\***

Packaging

Memo

0.00

Packaging

Identify and pack for shipping as per PPP D412-664-203  
\*\*\*\*\*Ensure tube is not packaged if curing time is less than 12 hrs, see step 27  
for application time & date \*\*\*\*\*  
Time & date of packaging: \_\_\_\_\_  
Location: 103

12/12/2012

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

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# Work Order ID 78576

**\*78576\***

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January-11-12 12:42:12 PM

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Approvals: Process Plan: \_\_\_\_\_ Date: \_\_\_\_\_ Tooling: \_\_\_\_\_ Date: \_\_\_\_\_

Run Start **\*NR1\***

QC: \_\_\_\_\_ Date: \_\_\_\_\_ SPC (Y/N): \_\_\_\_\_ Date: \_\_\_\_\_

Stop **\*NR2\***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
280	QC21- Final Inspection - Work Order Release	0.00							
<b>*280*</b>									
QC	Memo	0.00							
Quality Control									

MF  
12-022

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

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**NOTE:** Date & initial all entries



# Picklist Print

January-11-12 12:42:16 PM

Work Order ID: 78576

**\*78576\***

Parent Item: D412-664-203

**\*D412-664-203\***

Parent Item Name: Crosstube Aft

Start Date: 11/01/2012

Required Date: 31/01/2012

Start Qty: 1.00

Required Qty: 1.00

**Comments:**  
 IPP Rev:E04.02.16Reformat; Added D3189-1K/DS  
 IPP Rev:F 06-03-29 Remove Coments on Pick List JLM  
 IPP Rev:G 06.12.08 per ECN 886 EC  
 IPP Rev:H 07-04-30 As per Rev D JLM  
 IPP Rev:I 08-06-12 add comment in seq. 21 DD verified by:EC IPP rev J  
 11.04.21 DEO D412-664-243-E-1 EC verified DD IPP REV:K  
 11.10.03 DEO D412-664-243-E-2 DD verf:EC

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
D412-664-203TRN		Manufactured	No	380127		110	Each	0.0000	1	1	1	12-2-13	
<b>*D412-664-203TRN*</b>									**				
Crosstube Turning Detail													
D2896-1		Manufactured	No			230	Each	25.0000	1	1			
<b>*D2896-1*</b>									**			12-2-21	
Support													
				<u>Location</u>		<u>Loc Qty</u>		<u>Loc Code</u>					
				LG053		25							
				71502		4				1			
				74465		21							
D3189-1		Manufactured	No			230	Each	24.0000	2	2			
<b>*D3189-1*</b>									**			12-2-21	
Chafing Shield													
				<u>Location</u>		<u>Loc Qty</u>		<u>Loc Code</u>					
				FG		4							
				36065		4							
				LG053	76473	20				2			
				71353		20							

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

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Work Order ID: 78576

**\*78576\***

Parent Item: D412-664-203

**\*D412-664-203\***

Parent Item Name: Crosstube Aft

Start Date: 11/01/2012

Required Date: 31/01/2012

Start Qty: 1.00

Required Qty: 1.00

D3595-063-570

Manufactured No

230

Each

120.0000

2

2

**\*D3595-063-570\***

RUBBER CUSHION

\*\*

AS 12-2-21

Location

Loc Qty

Loc Code

FG

8

37971

1

42243

7

MAT052

112

71534

35

76546

77

2

MS21920-28

Purchased

No

230

Each

72.0000

4

4

**\*MS21920-28\***

Clamp(per MIL-DTL-8783C)

\*\*

AS 12-2-21

Location

Loc Qty

Loc Code

FG

5

105884

5

LG050

67

116839

2

118713

4

119285

1

119920

30

120054

30

4

MS21920-30

Purchased

No

230

Each

86.0000

2

2

**\*MS21920-30\***

clamp(per MIL-DTL-8783C)

\*\*

AS 12-2-21

Location

Loc Qty

Loc Code

LG

50

119529

50

LG050

22

117998

22

LG051

14

111258

14

2

January-11-12 12:42:16 PM

Shop Packet Print

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

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\*78576\*

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\*D412-664-203\*

Parent Item Name: Crosstube Aft

Start Date: 11/01/2012

Required Date: 31/01/2012

Start Qty: 1.00

Required Qty: 1.00

AN6-40A  
\*AN6-40A\*  
Bolt

Purchased No

250 Each

32.0000

4 4

\*\*

SP

## Location

## Loc Qty

## Loc Code

ST342

32

119749

32

Purchased No

250 Each

23.0000

2 2

\*\*

4x

m/20187 SP

## Location

## Loc Qty

## Loc Code

ST342

23

119449

3

119749

20

AN960JD616

NAS1149D0663J

Purchased No

250 Each

0.0000

18 18

\*\*

m1190758

\*AN960JD616\*  
Washer

MS21042L6

Purchased No

250 Each

1,118.000

6 6

\*\*

SP 12-02-22

\*MS21042L6\*  
Nut

## Location

## Loc Qty

## Loc Code

ST300

1118

117677

25

118384

5

118927

48

119075

1000

119736

40

Lex

# Dart Aerospace Ltd

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

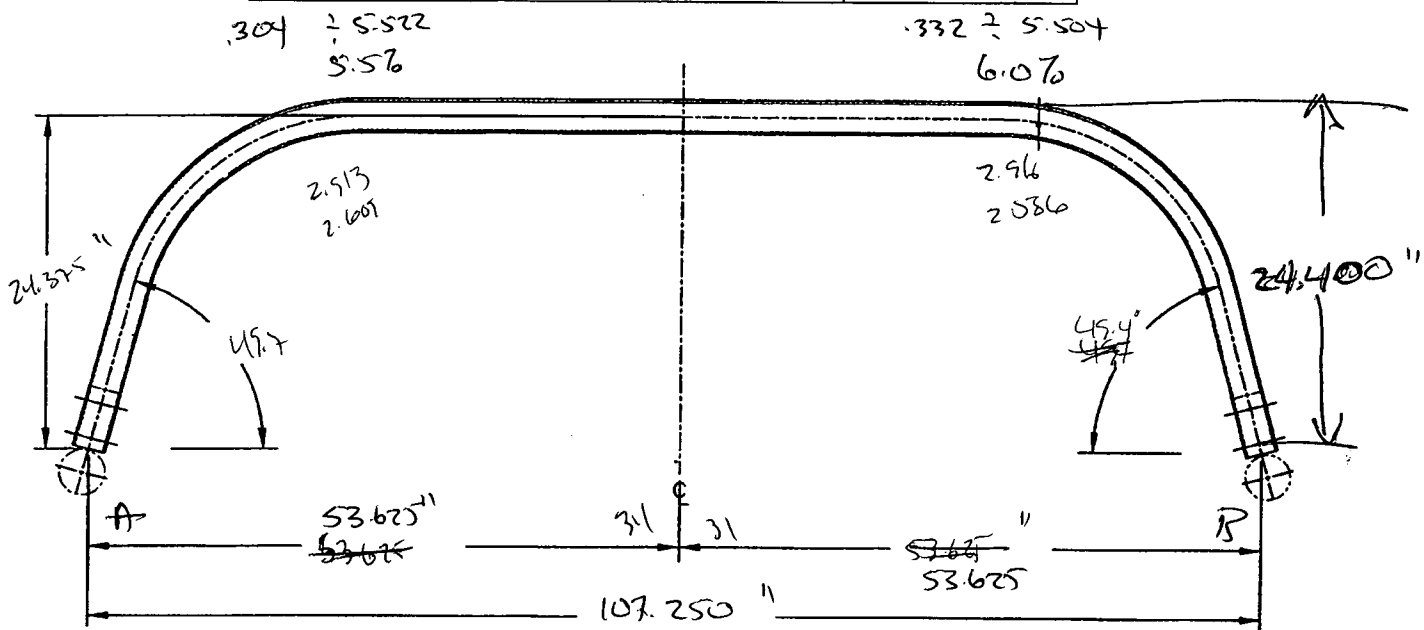
Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries

<b>DART AEROSPACE LTD</b>		<b>Work Order:</b>	78576
<b>Description:</b> Crosstube High Aft (412)		<b>Part Number:</b>	D412-664-203
<b>Inspection Dwg:</b> D412-664-243		<b>Rev:</b> E	<b>Page 1 of 1</b>

Required Dimension	Min	Max
Height	24.24	24.50
1/2 Span	53.59	53.85
Angle	49	52
Total Span	107.18	107.70



Comments	
Size A =	5.576 crushing @ 34 passes
Size B =	6.076 crushing @ 31 passes

QC15 Inspection	<i>[Signature]</i>
Date	12/02/14

Rev	Date	Change	Revised by	Approved
A	07.02.06	New Issue	KJ/JM	
B	07.05.08	Dimensions updated per Dwg rev. D	KJ/JLM	
C	10.02.02	Dwg Rev updated	KJ	<i>[Signature]</i>

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries



Item	Qty -243	Part Number	Description
1	X	D412-664-243	CROSSTUBE ASSEMBLY (412 HIGH AFT)
2	1	D6009-129	CROSSTUBE
3	2	D3595-063-570	RUBBER CUSHION
4	1	D2896-1	SUPPORT
5	2	D3189-1	CHAFING SHIELD
6	2	D2856-600-1009	ABRASION STRIP
7	4	MS21920-28	CLAMP
8	2	MS21920-30	CLAMP (OR MS21920-32)
9	A/R	MAGNOBOND 6398	ROCKWELL SPECIFICATION RBO-120-023 ADHESIVE (TEXTRON/BELL SPEC. 299-947-100, TYPE II, CLASS 2 ADHESIVE)

#### GENERAL NOTES:

- 1) MATERIAL: MANUFACTURED FROM D6009-129  
FINISHED LENGTH = 124.100±0.020 (BEFORE BENDING/TRIMMING)
- 2) FINISH: CHEMICAL CONVERSION COAT PER DART QSI 005 4.1  
PRIME INSIDE AND OUTSIDE PER DART QSI 005 4.2  
PAINT OUTSIDE PER DART QSI 005 4.2
- 3) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED.
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED.
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX.
- 6) IDENTIFICATION: SCRIBE DART PART NUMBER "D412-664-243" AND BATCH NUMBER ON INSIDE OF CUFF USING VIBRATING STYLUS.
- 7) WEIGHT: 47.0 lbs (PER IIN-D212-664)
- 8) PART IS SYMMETRIC ABOUT CENTERLINE.
- 9) RUN CUTTER OFF PART. BLEND OUT EDGE LONGITUDINALLY, TRANSITION SHOULD BE SMOOTH.
- 10) BEND PROGRESSIVELY WITH A MINIMUM OF 8 PASSES. MAXIMUM TUBE FLATTENING DUE TO BENDING IS 6% BASED ON O.D.
- 11) LIQUID PENETRANT INSPECT OUTSIDE SURFACE OF CROSSTUBE PER QSI 038.
- 12) INSTALL D2896-1 SUPPORT USING 0.03" TO 0.06" THICK LAYER OF MAGNOBOND 6398 TO THE SURFACE OF D2896-1 THAT WILL BE IN CONTACT WITH THE CROSSTUBE PER QSI 015. LET CURE FOR 12 HOURS AFTER INSTALLATION AND PRIOR TO PACKAGING.
- 13) INSTALL MS21920-30 CLAMPS (OR -32) WITH D3595-063-570 RUBBER CUSHIONS TO SECURE THE D2896-1 SUPPORT ON TOP SIDE OF THE CROSSTUBE. ENSURE CLAMPS ARE OPPOSITE OF CROSSTUBE SUPPORT.
- 14) INSTALL D2856-600-1009 ABRASION STRIPS WITH A 0.13 REF GAP ON BOTTOM SIDE OF CROSSTUBE PER QSI 035.
- 15) EXTREME CARE MUST BE TAKEN TO PROTECT THE OUTSIDE SURFACE OF THE TUBE. THE OUTSIDE SURFACE MUST BE SMOOTH AND FREE FROM SURFACE DEFECTS SUCH AS SCRATCHES, NICKS, OR DENTS. DEFECTS UP TO 0.005" MAY BE BLENDED OUT LONGITUDINALLY. CIRCUMFERENTIAL GRIND MARKS ARE UNACCEPTABLE.
- 16) TORQUE CLAMPS 80 TO 100 IN-LB. ENSURE AT LEAST 1.5 THREADS SHOWING IN SAFETY AND THAT NUT HAS NOT BOTTOMED-OUT AFTER TORQUING.

SUBMITTED  
 REVIEWED  
 ENGINEER  
 UNCONTROLLED  
 SUBMITTAL

WORK ORDER  
 NO. 78576 M.C.J.  
 12/01/11

② DEO ATTACHED

RELEASED  
 2009-10-29  
 JWW

E	REFORMAT/REVISE GENERAL NOTES; REORGANIZED VIEWS AND REFORMATTED DRAWING TO CURRENT STANDARDS; RELOCATED FLAG #6 PER PAR 08-046 (ZN A6-3); ADD TOLERANCE (ZN B6-3, C4-3, C8-3 & C5-3); MOVED TURNING DETAIL & UPDATED TOLERANCE TO SHEET 4.	RF	09.09.30
D	REMOVE D2732-058, CHANGE TO D3595-063-570	PH	07.03.09
C	REMOVE D2856-600-1087. ADD D2732-058 & MAGNOBOND 6398. MS21920-32 WAS MS21920-30	MB	06.10.27
B	ADD HOLES FOR COMPATABILITY WITH BHT/AA SKIDTUBES	PH	05.02.04
A	NEW ISSUE	PH	01.10.17
REV.	DESCRIPTION	BY	DATE
DESIGN	PH	DART AEROSPACE LTD	
DRAWN	RF	HAWKESBURY, ONTARIO, CANADA	
CHECKED	PH	DRAWING NO.	REV. E
MFG. APPR.	PH	D412-664-243	SHEET 1 OF 4
APPROVED	PH	TITLE	SCALE
DE APPR.	PH	CROSSTUBE ASSEMBLY (412 HI AFT)	NTS
DATE	09.09.30	<small>COPYRIGHT © 2001 BY DART AEROSPACE LTD THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.</small>	

# Dart Aerospace Ltd

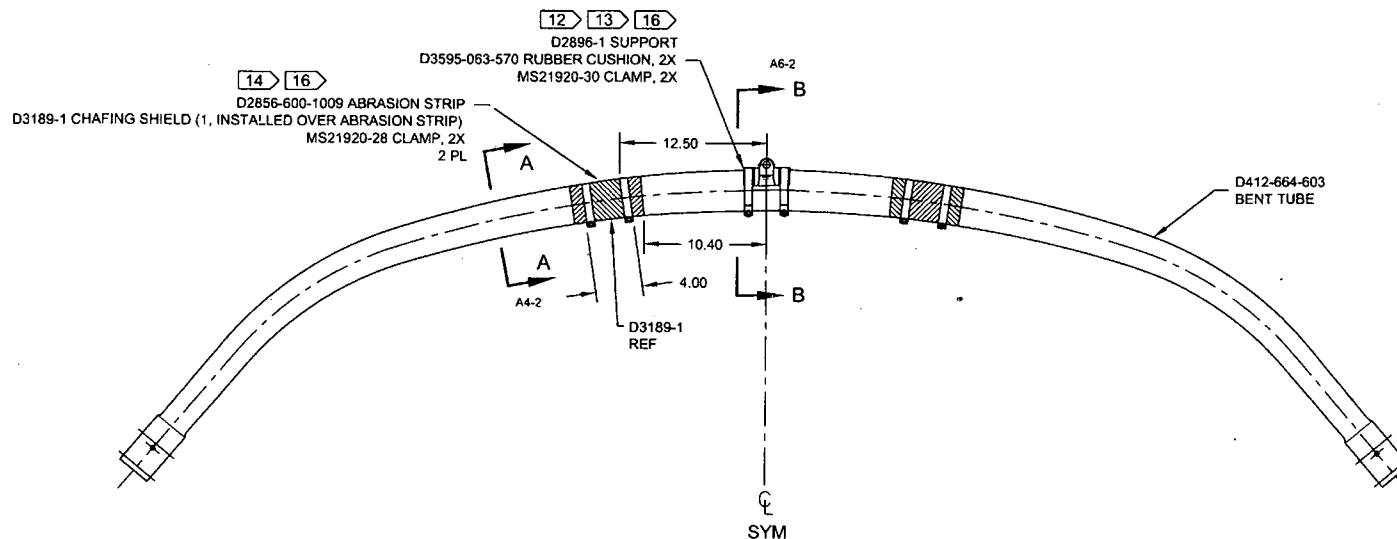
W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_  
 Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

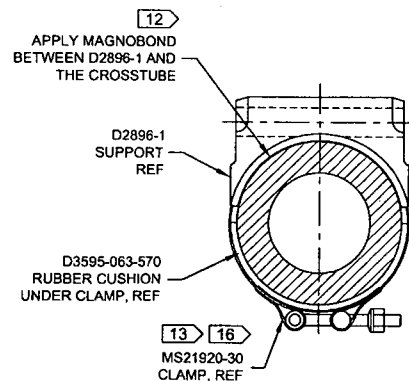
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DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries

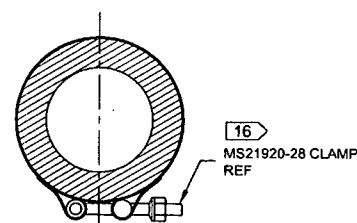
78576



**D212-664-243**  
**ASSEMBLY DETAIL**



**SECTION B-B** D4-2  
SCALE 4X



**SECTION A-A** C6-2  
SCALE 4X

2 DEO ATTACHED

**RELEASED**  
2009-10-29  
NR

DESIGN	PH	<b>DART AEROSPACE LTD</b>	
DRAWN	RF	HAWKESBURY, ONTARIO, CANADA	
CHECKED	97	DRAWING NO.	REV. E
MFG. APPR.	SS	D412-664-243	SHEET 2 OF 4
APPROVED	14	TITLE	SCALE
DE APPR.	14	CROSSTUBE ASSEMBLY (412 HI AFT)	NTS
DATE	09.09.30	COPYRIGHT © 2001 BY DART AEROSPACE LTD THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.	

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

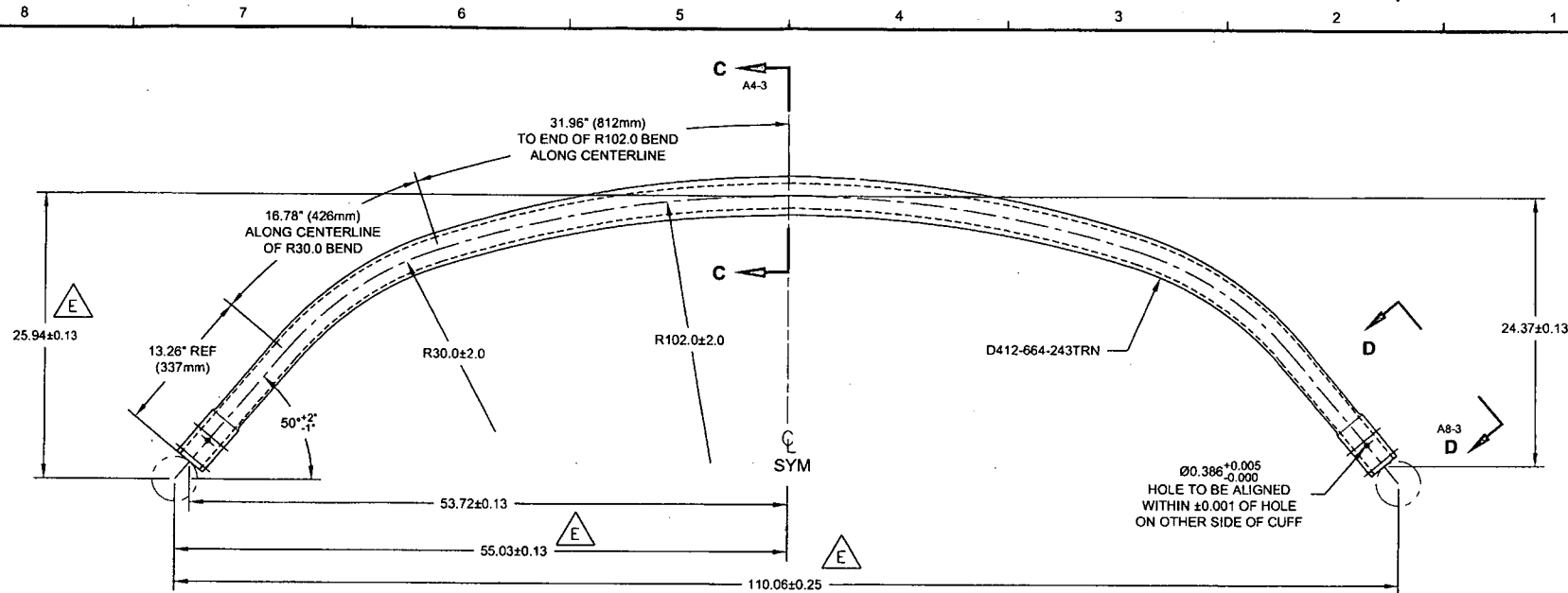
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Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

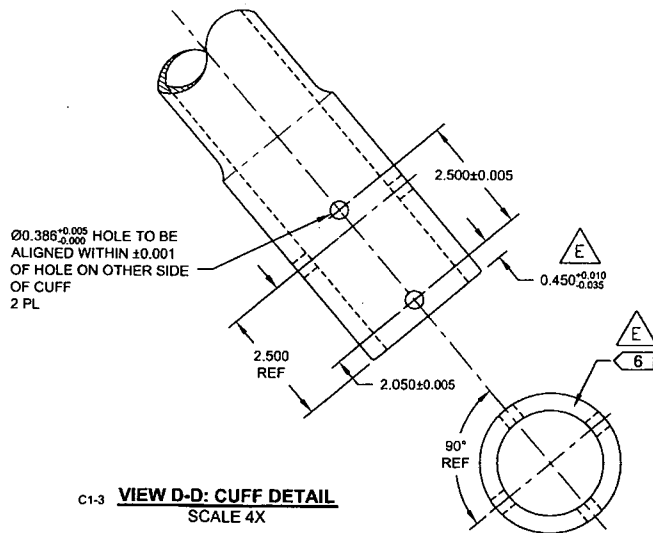
**NOTE:** Date & initial all entries

78576

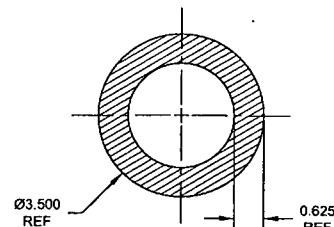


**D412-664-603** 10 E  
**BENDING AND DRILLING DETAIL**

② DEO ATTACHED  
**RELEASED**  
 2009-10-29  
 MP



C1-3 **VIEW D-D: CUFF DETAIL**  
 SCALE 4X



**SECTION C-C** D5-3  
 SCALE 4X

DESIGN	PH	<b>DART AEROSPACE LTD</b> HAWKESBURY, ONTARIO, CANADA	
DRAWN	RF		
CHECKED	Q	DRAWING NO.	REV. E
MFG. APPR.	JS	D412-664-243	SHEET 3 OF 4
APPROVED	10	TITLE	SCALE
DE APPR.	4	CROSSTUBE ASSEMBLY (412 HI AFT)	NTS
DATE	09.09.30	COPYRIGHT © 2001 BY DART AEROSPACE LTD <small>THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE, OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.</small>	

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

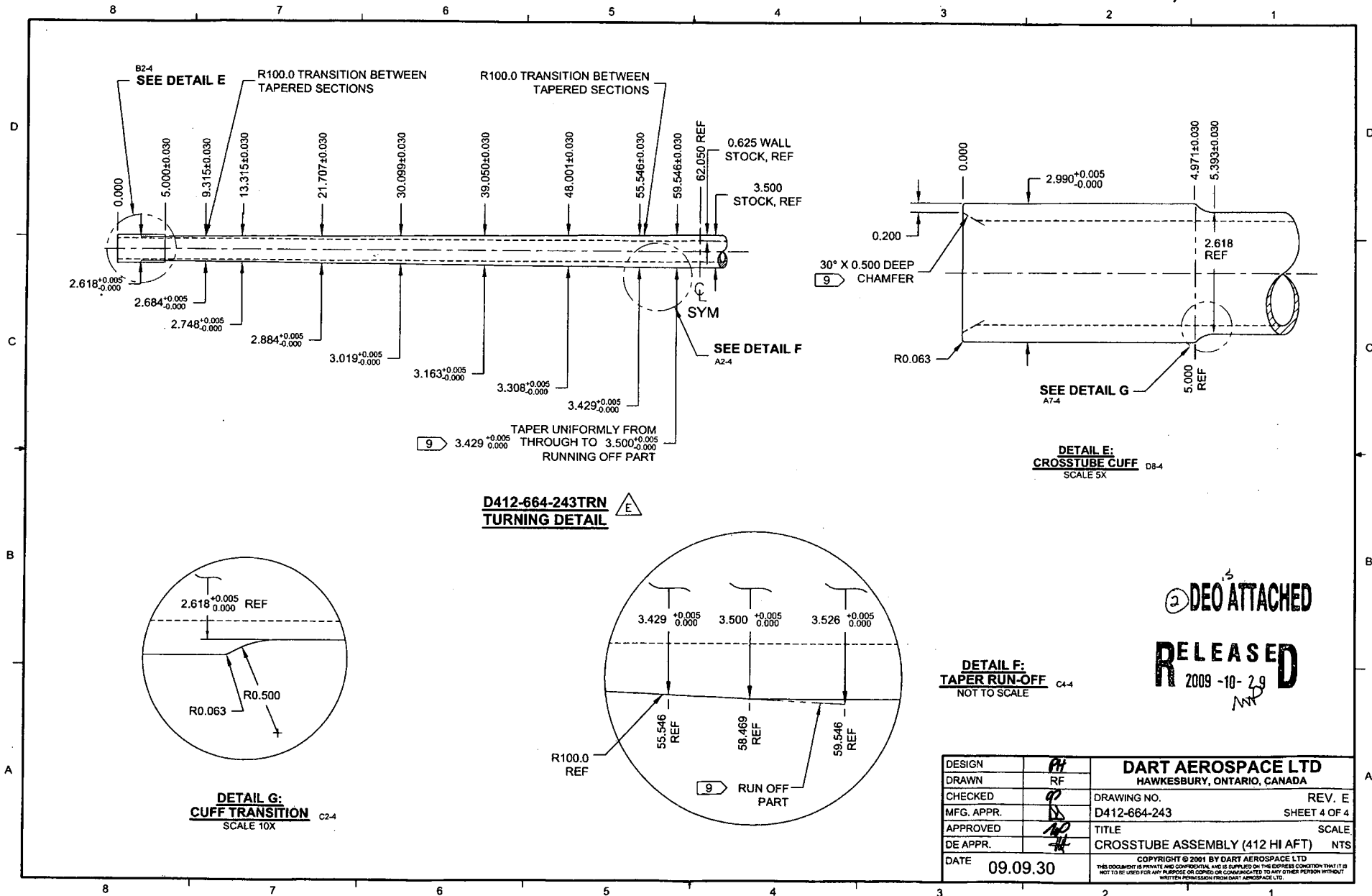
Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries

78576



W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries



78576

DRAWING NO. D412-664-243	TITLE CROSSTUBE ASSEMBLY (412 HI AFT)	REV. E	DART AEROSPACE LTD ENGINEERING ORDER		D.E.O. NO. D412-664-243-E-1	SHEET NO. SHEET 1 OF 2	SCALE NTS
DRAWN	CHECKED	MFG. APPR.	APPROVED	DE APPR.			
DATE 11.03.31	DATE 11/03.31	DATE 11.03.31	DATE 11/03.31	DATE 11.03.31			

**PURPOSE:**

REMOVED ABRASION STRIP IN FAVOR OF A THIN LAYER OF PROSEAL 890.

**CHANGE:**

PARTS LIST IS AMENDED AS FOLLOWS:

**IS:**

Item	Qty -243	Part Number	Description
6	0	D2856-600-1009	ABRASION STRIP

**WAS:**

6	2	D2856-600-1009	ABRASION STRIP
---	---	----------------	----------------

NOTES 2 AND 14, SHEET 1 ARE AMENDED AS FOLLOWS:

**IS:**

- 2) FINISH: CHEMICAL CONVERSION COAT PER DART QSI 005 4.1  
PRIME INSIDE AND OUTSIDE PER DART QSI 005 4.2  
MASK UNDERSIDE OF CROSSTUBE AS SHOWN (HATCHED AREA)  
PAINT OUTSIDE PER DART QSI 005 4.2  
AFTER PAINTING, APPLY CLEAR COAT ON HATCHED AREA
- 14) APPLY A THIN COAT OF PROSEAL 890 ON INSIDE CONCAVE SURFACE OF D3189-1  
CHAFING SHIELD AND LET CURE PER MANUFACTURER'S INSTRUCTIONS. INSTALL  
PROSEALED D3189-1 CHAFING SHIELD ONTO CROSSTUBE BY APPLYING A THIN COAT OF  
PROSEAL 890 ONTO CROSSTUBE. BE SURE TO ELIMINATE ANY AIR GAPS.

**WAS:**

- 2) FINISH: CHEMICAL CONVERSION COAT PER DART QSI 005 4.1  
PRIME INSIDE AND OUTSIDE PER DART QSI 005 4.2  
PAINT OUTSIDE PER DART QSI 005 4.2
- 14) INSTALL D2856-600-1009 ABRASION STRIPS WITH A 0.13 REF GAP ON BOTTOM SIDE OF  
CROSSTUBE PER QSI 035.

RELEASED  
2011-04-07  
MD

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries

70576

DRAWING NO. D412-664-243	TITLE CROSSTUBE ASSEMBLY (412 HI AFT)	REV. E	DART AEROSPACE LTD ENGINEERING ORDER	D.E.O. NO. D412-664-243-E-1	SHEET NO. SHEET 2 OF 2	SCALE NTS
DRAWN	CHECKED	MFG. APPR.	APPROVED	DE APPR.		
DATE 11.03.31	DATE 11.03.31	DATE 11.03.31	DATE 11.03.31	DATE 11.03.31		

**IS:**

D3189-1 CHAFING SHIELD (1, INSTALLED OVER PROSEAL 890)  
MS21920-28 CLAMP, 2X  
2 PL

D412-664-603  
BENT TUBE

2.00  
1.00

**WAS:**

D2856-600-1009 ABRASION STRIP  
D3189-1 CHAFING SHIELD (1, INSTALLED OVER ABRASION STRIP)  
MS21920-28 CLAMP, 2X  
2 PL

D3189-1  
REF

**D412-664-243  
ASSEMBLY DETAIL**

RELEASED  
2011-04-07  
MD

MASK AREA PRIOR TO PAINTING AND  
APPLY CLEAR COAT AFTER PAINTING

2.00

C  
SYM

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries

78576

DRAWING NO. D412-664-243	TITLE CROSSTUBE ASS'Y (412 HI AFT)	REV. E	DART AEROSPACE LTD ENGINEERING ORDER		D.E.O. NO. D412-664-243-E-2	SHEET NO. SHEET 1 OF 1	SCALE NTS
DRAWN 92	CHECKED ASS	MFG. APPR. RE	APPROVED MP		DE APPR. H		
DATE 11.09.07	DATE 11.09.19	DATE 11.09.19	DATE 11.09.19		DATE 11.09.19		

**PURPOSE:**

REPLACE MAGNOBOND WITH 3M DP460 SCOTCH-WELD EPOXY ADHESIVE

**CHANGE:**

IS:

Item	Qty -243	Part Number	Description
9	A/R	SCOTCH-WELD DP460	EPOXY ADHESIVE, 3M SCOTCH-WELD

WAS:

9	A/R	MAGNOBOND 6398	ROCKWELL SPECIFICATION RBO-120-023 ADHESIVE (TEXTRON/BELL SPEC. 299-947-100, TYPE II, CLASS 2 ADHESIVE)
---	-----	----------------	---

NOTE 12 & 16, SHEET 1 IS AMENDED AS FOLLOWS:

IS:

- 12) INSTALL D2896-1 CENTER SUPPORT USING A 0.04" TO 0.07" THICK LAYER OF SCOTCH-WELD DP460 PER QSI 015. LET CURE FOR 24 HOURS AFTER INSTALLATION AND PRIOR TO PACKAGING.
- 16) TORQUE CLAMPS 80 TO 100 IN-LB. ENSURE AT LEAST 1.5 THREADS SHOWING IN SAFETY AND THAT NUT HAS NOT BOTTOMED-OUT AFTER TORQUING. PRIOR TO PACKAGING, RE-CHECK TORQUE ON CLAMPS AFTER ADHESIVE HAS CURED FOR 24 HOURS.

WAS:

- 12) INSTALL D2896-1 SUPPORT USING 0.03" TO 0.06" THICK LAYER OF MAGNOBOND 6398 TO THE SURFACE OF D2896-1 THAT WILL BE IN CONTACT WITH THE CROSSTUBE PER QSI 015. LET CURE FOR 12 HOURS AFTER INSTALLATION AND PRIOR TO PACKAGING.
- 16) TORQUE CLAMPS 80 TO 100 IN-LB. ENSURE AT LEAST 1.5 THREADS SHOWING IN SAFETY AND THAT NUT HAS NOT BOTTOMED-OUT AFTER TORQUING.

RELEASED  
2011-09-29  
MP

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries



ACUREN

## RAPPORT D'INSPECTION PAR RESSUAGE

P- 12178

PAGE 1 DE 1

CLIENT: DART AEROSPACE DATE: 2012-02-17 HEURE: 8 AM ☐ AM ☐ PM  
 ATTENTION: CHANTEL N° TRAVAIL: 188-12-C0043  
 ACUREN  
 ADRESSE: 1270 ABERDEEN ST. N° CLIENT PO/WO: 30551  
HAWKES BURY, ONTARIO SITE DE TRAVAIL: HAWKES BURY  
 PROJET: ACCEPTATION STD. ASTM E1417-05 DATE/REV. NO INDICATION  
 ITEM(S) EXAMINÉ: SEE BELOW

DESCRIPTION DES TRAVAUX: N° PROCÉDURE P0002 DATE/REV. 2009 N° TECHNIQUE LT-XXXXXXX DATE/REV. 2009  
 N° ITEMS: SEE BELOW MATÉRIEL: ALUMINIUM ÉPAISSEUR: VARIABLE  
 DESCRIPTION: FPT ON X-TUBES AND RAPPEL

## DÉTAILS DES INSPECTIONS

MÉTHODE: ☒ FLUORESCENT ☐ VISIBLE ☐ LAVABLE À L'EAU ☐ MÉTHODE DISSOLVANT ☐ PRÉ-ÉMULSIONNANT  
 MARQUE: MAGNAFLUX LUM. NOIRE S/N 26529 ☐ PUISS. > 1 000 µ W/cm² ☐ AMBIANT < 2 fc  
 PÉNÉTRANT: ZL67 TEMPS PÉNÉTRATION MIN. 10 30 MIN. ÉQUIP. LUMIÈRE ☒ LAMP. POCHÉ ☐ LAMP. CULASSE ☐ PUISS. > 100 fc @ SURFACE  
 DISSOLVANT PÉNÉTRANT TEMPS SÉCHAGE MIN. >10 MIN. AUTRES  
 RÉVÉLATEUR TEMPS RÉVÉLATION MIN. 10 MIN. MÈTRE LUM. N/S DATE CAL DUE 2012-12-07  
 TYPE RÉVÉLATEUR ☐ NON AQUEUX ☐ AQUEUX ☐ SEC

## SURFACE INSPECTÉE

CONDITION SURFACE ☐ MEULÉE ☐ SOUDÉE ☒ MACHINÉE ☐ MRENAILLÉE ☐ MÉTAL PROPRE  
 TEMPÉRATURE SURFACE ☐ < - 4°C/20°F ☐ - 4°C/20°F À 10° C/50°F ☒ 10°C/50°F À 52°C/125°F ☐ > 52°C/125°F

RÉSULTATS ☐ MÉTRIQUE ☐ IMPÉRIALE

ITEM	COMMENTAIRES	ACCEPTÉ	REJETÉ
1	ID 79701 item D 3011-1 (x3)	✓	
2	ID 80049 item D 206-667-2078L	✓	
3	ID 78574 item D 412-664-203	✓	
4	ID 78573 item D 412-664-203	✓	
5	ID 78575 item D 412-664-203	✓	
6	ID 78576 item D 412-664-203	✓	
7	ID 79115 item D 212-664-107	✓	
8	ID 79116 item D 212-664-107	✓	

NOTE: NO INDICATION FOUND, AT THE MOMENT OF INSPECTION ON ALL PIECES.

## Étendue des Services

L'entente selon laquelle le Groupe Acuren Inc. Exécute les services ne concerne que les énoncés par écrit. En aucune circonstance ces services ne s'étendent au-delà de l'exécution des services demandés. Il est entendu que toutes les descriptions, les observations et les expressions d'opinions faites par Acuren reflètent les opinions ou les observations de l'entreprise fondées sur l'information et les hypothèses fournies par le propriétaire/opérateur, et elles ne constituent pas des déclarations ou des garanties ou ne peuvent être interprétées comme constituant. Le Groupe Acuren Inc. N'assume aucune des responsabilités du propriétaire/opérateur, et le propriétaire/opérateur conserve la responsabilité entière des décisions prises en matière d'ingénierie, de fabrication, de réparation et d'usage à partir de l'information ou des données fournies par Acuren en rapport avec les services décrits dans les présentes ne peuvent excéder le coût des services rendus.

## Norme de Diligence

Dans l'exécution des services, le Groupe Acuren Inc. Applique le degré de diligence, le soin et la compétence normalement exercés dans des circonstances semblables par d'autres fournisseurs de ce type de services opérant dans la même localité ou dans une localité similaire. Aucune autre garantie, implicite ou explicite, n'est faite ou voulue par le Groupe Acuren Inc.

## SIGNATURES

REPRÉSENTANT: Andrew Sheldon FTJ#: F003487  
 TECHNICIEN (SIGNATURE): [Signature] MOULÉ: [Signature] SIGNATURE  
 NOM (MOULÉ): DAVID PEPIN 1<sup>er</sup> TECHNICIEN 2<sup>nd</sup> TECHNICIEN  
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 ONGC N° REGISTRATION 11611 ONGC N° REGISTRATION \_\_\_\_\_

## 5.0 PARTS LIST

## 5.1 HIGH GEAR CROSSTUBES

Item	-101	-201	-203	Part Number	Description
	X			D212-664-101	CROSSTUBE INSTALLATION, 204/205/210/212/214/412, UH-1H, UH-1A/B/E/F/L/P, TH-1F/L, HH-1K HIGH FWD
		X		D212-664-201	CROSSTUBE INSTALLATION, 204/205/210/212/214, UH-1H, UH-1A/B/E/F/L/P, TH-1F/L, HH-1K HIGH AFT
			X	D412-664-203	CROSSTUBE INSTALLATION, 412 HIGH AFT
1	1			D212-664-141	CROSSTUBE ASSEMBLY, 204/205/210/212/214/412, UH-1H, UH-1A/B/E/F/L/P, TH-1F/L, HH-1K HIGH FWD
2		1		D212-664-241	CROSSTUBE ASSEMBLY, 204/205/210/212/214, UH-1H, UH-1A/B/E/F/L/P, TH-1F/L, HH-1K HIGH AFT
3			1	D412-664-243	CROSSTUBE ASSEMBLY, 412 HIGH AFT
10	2			* D2893-1	SUPPORT
11	4			* D3595-063-450	RUBBER CUSHION
12	4			* MS21920-25	CLAMP (OR MS21042-26)
13	4			AN6-35A	BOLT
14	4			AN6-36A	BOLT
15	6			MS21042L6	NUT (OR MS21042-6)
16	18			AN960JD616	WASHER
20		2		* D2940-1	SUPPORT
21		4		* D3595-063-530	RUBBER CUSHION
22		4		* MS21920-28	CLAMP (OR MS21042-30)
23		4		AN6-40A	BOLT
24		2		AN6-41A	BOLT
25		6		MS21042L6	NUT (OR MS21042-6)
26		18		AN960JD616	WASHER
30			1	* D2896-1	SUPPORT
32			2	* D3595-063-570	RUBBER CUSHION
33			4	* MS21920-28	CLAMP
34			2	* MS21920-30	CLAMP (OR MS21042-32)
35			4	AN6-40A	BOLT
36			2	AN6-41A	BOLT
37			6	MS21042L6	NUT (OR MS21042-6)
38			18	AN960JD616	WASHER
39			2	* D3189-1	CHAFING SHIELD
50	1	1		D3428-1	PLACARD

\*REFERENCE ONLY. PARTS ARE INCLUDED IN D212-664-141/-241 OR D412-664-243 ASSEMBLIES ABOVE  
NOTE: KITS INCLUDE EXTRA HARDWARE FOR COMPATIBILITY WITH BOTH DART AND BELL/AAI  
SKIDTUBES.



# Location/Lot Activity

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Criteria : All Items All Locations Lot: 71502 All Transaction Types All Dates Report on Locations & Lots

Transaction Type	Item ID/ Item Name	Warehouse Location ID	Reason	Employee ID Location Code	Loc Trans Date	LocQtyPrior/ Location Qty	Lot Number	LotQtyPrior/ Lot Qty	Shelf Life Date Lot Code	Extended Cost
Account Value Change	D2896-1 / Support	Main Warehouse		FAUT01		20.0000		20.0000		
		LG			10/19/2011	-20.0000	71502	-20.0000		(\$6,397.93)
		Main Warehouse		FAUT01		20.0000		20.0000		
		LG			10/19/2011	20.0000	71502	20.0000		\$6,397.93
								0.0000		\$0.00
Inv Adjustment	D2896-1 / Support	Main Warehouse	Found	FAUT01		21.0000		0.0000		
		LG053			3/7/2012	1.0000	71502	1.0000		\$319.90
		Main Warehouse	Found	FAUT01		21.0000		0.0000		
		LG053			3/7/2012	1.0000	71502	1.0000		\$319.90
		Main Warehouse	B/N correction	GOLD01		21.0000		0.0000		
		LG053			3/23/2012	1.0000	71502	1.0000		\$319.90
		Main Warehouse	B/N correction	GOLD01		21.0000		0.0000		
		LG053			3/27/2012	1.0000	71502	1.0000		\$319.90
								4.0000		\$1,279.59
Issue	D2896-1 / Support	Main Warehouse	73691	QUIR01		20.0000		20.0000		
		LG			10/19/2011	-1.0000	71502	-1.0000		(\$319.90)
		Main Warehouse	73690	QUIR01		19.0000		19.0000		
		LG			10/19/2011	-1.0000	71502	-1.0000		(\$319.90)
		Main Warehouse	75417	QUIR01		18.0000		18.0000		
		LG			11/9/2011	-1.0000	71502	-1.0000		(\$319.90)
		Main Warehouse	75416	QUIR01		17.0000		17.0000		
		LG			11/9/2011	-1.0000	71502	-1.0000		(\$319.90)
		Main Warehouse	74376	FAUT01		16.0000		16.0000		
		LG			11/21/2011	-1.0000	71502	-1.0000		(\$319.90)

Transaction Type	Item ID/ Item Name	Warehouse Location ID	Reason	Employee ID Location Code	Loc Trans Date	LocQtyPrior/ Location Qty	Lot Number	LotQtyPrior/ Lot Qty	Shelf Life Date Lot Code	Extended Cost
Issue	D2896-1 / Support	Main Warehouse	74377 -203	FAUT01		15.0000		15.0000		
		LG			11/21/2011	-1.0000	71502	-1.0000		(\$319.90)
		Main Warehouse	76351 -203	DESJ02		35.0000		14.0000		
		LG053			12/6/2011	-1.0000	71502	-1.0000		(\$319.90)
		Main Warehouse	76350 -203	DESJ02		34.0000		13.0000		
		LG053			12/6/2011	-1.0000	71502	-1.0000		(\$319.90)
		Main Warehouse	77108 -203	DESJ02		33.0000		12.0000		
		LG053			12/9/2011	-1.0000	71502	-1.0000		(\$319.90)
		Main Warehouse	77273 -203	LAVO01		32.0000		11.0000		
		LG053			12/9/2011	-1.0000	71502	-1.0000		(\$319.90)
		Main Warehouse	77109 -203	DESJ02		31.0000		10.0000		
		LG053			12/13/2011	-1.0000	71502	-1.0000		(\$319.90)
		Main Warehouse	77433	QUIR01		30.0000		9.0000		
		LG053			12/19/2011	-1.0000	71502	-1.0000		(\$319.90)
		Main Warehouse	77434	QUIR01		29.0000		8.0000		
		LG053			12/20/2011	-1.0000	71502	-1.0000		(\$319.90)
		Main Warehouse	77748	FAUT01		28.0000		7.0000		
		LG053			1/6/2012	-1.0000	71502	-1.0000		(\$319.90)
		Main Warehouse	77533	FAUT01		27.0000		6.0000		
		LG053			1/6/2012	-1.0000	71502	-1.0000		(\$319.90)
		Main Warehouse	77534	FAUT01		26.0000		5.0000		
		LG053			1/6/2012	-1.0000	71502	-1.0000		(\$319.90)
		Main Warehouse	78576	FAUT01		25.0000		4.0000		
		LG053			2/22/2012	-1.0000	71502	-1.0000		(\$319.90)
		Main Warehouse	78574	FAUT01		24.0000		3.0000		
		LG053			2/22/2012	-1.0000	71502	-1.0000		(\$319.90)

Transaction Type	Item ID/ Item Name	Warehouse Location ID	Reason	Employee ID Location Code	Loc Trans Date	LocQtyPrior/ Location Qty	Lot Number	LotQtyPrior/ Lot Qty	Shelf Life Date Lot Code	Extended Cost
Issue	D2896-1 / Support	Main Warehouse LG053	78575	FAUT01		23.0000		2.0000		
					2/22/2012	-1.0000	71502	-1.0000		(\$319.90)
		Main Warehouse LG053	78573	GOLD01		22.0000		1.0000		
					2/24/2012	-1.0000	71502	-1.0000		(\$319.90)
		Main Warehouse LG053	80135	FAUT01		22.0000		1.0000		
					3/7/2012	-1.0000	71502	-1.0000		(\$319.90)
		Main Warehouse LG053	80134	FAUT01		22.0000		1.0000		
					3/7/2012	-1.0000	71502	-1.0000		(\$319.90)
		Main Warehouse LG053	80585	GOLD01		22.0000		1.0000		
					3/23/2012	-1.0000	71502	-1.0000		(\$319.90)
		Main Warehouse LG053	80584	GOLD01		22.0000		1.0000		
					3/27/2012	-1.0000	71502	-1.0000		(\$319.90)
								-24.0000	(\$7,677.51)	
Loc Transfer	D2896-1 / Support	Main Warehouse LG053		GOLD01		0.0000		0.0000		
					11/30/2011	14.0000	71502	14.0000		\$4,478.55
		Main Warehouse LG		GOLD01		14.0000		14.0000		
					11/30/2011	-14.0000	71502	-14.0000		(\$4,478.55)
								0.0000	\$0.00	
WIP Receipt	D2896-1 / Support	Main Warehouse LG	71502	GOLD01		0.0000		0.0000		
					10/3/2011	20.0000	71502	20.0000		\$6,397.93
										20.0000